Cartography is rooted in the anatomy of the temporal lobe, giving focus and direction to human behavior. As a result, Cartography formulates a connection between ‘the self’ and ‘the other’.
However the historical perception of Africa contained mostly blank spaces. In contra-distinction, the Afrterra Free Library presents here a measure of physical evidence, to suggest that the existence of a ‘Great-Lake’ in the interior of West Africa was known to Western Europe for more than a thousand years.
and that this ‘Lake’ was in fact the Inland Niger Delta.
Design

- Motif: Continental Map of Africa
- Sample Size: 400 maps
- Dates: 1000-1900 AD
- Structure:
  - Excel Database
  - 20 Comparative Features

Using our primary material and those of the Library of Congress, the Harvard Map Library, and the Universities of Florida and Illinois, we examined a total of 400 early maps dating from 1000 to 1900 AD. From this representative panel, we constructed a spreadsheet of metadata for a queried analysis of the patterns, origins, and meaning imbedded in these sheets.
Our “Focus” Lake (named or unnamed) in the West African Sahel was one of the most consistently visible cartographic features throughout a 900-year archival record. This feature occurred early and remained prominent during all centuries and languages of commercial engraving. In a comparative analysis, this Lake appeared on more maps than any other feature except the Nile. Its appearance preceded the noted centers of trade at Timbuktu and its prevalence exceeded any localization of commercial Gold, Salt, or Slave trading sites such as El Mina, Taghaza, Monomotapa, or Goree.
The Toponyms

The “Focus-Lake” [Succession of Names]
- Nigrite Palus
- Lake Sigisma
- Lake Guber
- Lake Guarda
- Bog/Morais of Guarda
- Lake Maberia
- Bahar Seafeena
- Lake Dibbie
- Lake Debo

Consistently incorporated within the Niger watershed, we identified this lake in a succession of names including Nigrite Palus, Lake Sigisma, Lake Guber, Lake Guarda, Bogs of Guarda, Lake Maberia, Niger-Morass, Bahar Seafeena, Dibbie-Sea, Lake Dibbie, and finally all being one and the same, the current Lake Debo tantamount to the Inland Niger Delta.

The “Focus” Lake (named or unnamed) in the West African Sahel is documented to be one of the most consistently visible cartographic features in the interior of Africa throughout the 900-year archival record.

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and finally all being one and the same, the current Lake Debo tantamount to the Inland Niger Delta.
The early portrayal of this pool can be distilled into one of four geometric patterns with distinct lines of descent.
In the literature, ten specific accounts, most of which incorporate direct African testimonies, underlie the different cartographical models of the lake.
Early Patterns

1. “BAR-BELL” Form

O~~~~~~~~O

Claudius Ptolemy c150 AD-1600 AD
The Cartographic Origins:
The derivation of this “focus-lake” evolved from the earliest origins.

In the Greek *Euterpe*, Herodotus remarks on a journey in the first millennium BC by five Nasamones of Cyrenaica.

Upon crossing the Sahara, they observed an extensive marsh, and a large city inhabited by Negroes. and watered by a crocodile river flowing from the west to east.

Pliny, Strabo, and other accounts led to the Ptolemy *Geographia*, giving rise to a depiction of Saharan “Barbell-Lakes” (Nigrite Palus/Libya Palus) appearing in most manuscript maps from the 4th to the 16th centuries AD.
The earliest extant example of the “Barbell-Lakes” in inland Africa is the St. Sever Beatus of Liebana map c1060 AD in the Bibliotheque Nationale Paris (original lost c776 AD)
Prime examples of the “Barbell-Lakes” with similar derivation include:
The 11th century Cotton Manuscript Anglo-Saxon Mappamundi c1080, standing as the foundation of the British Library, London
This Western Nile has the so-called Mystical Horizon image of Relano
Early Patterns

2. “BRAIDED-ISLAND” Form

~~~(o)~~~~

al Idrisi 1054 AD--1500 AD

2) The Al-Idrisi-form “Braided-Island Lake” in the Senegal/Niger River (1154 AD—1500 AD). >~~~~~(o)~~~~~<
It is now imperative to examine the other predominant representation of the West African lacustrine system.

It is here identified as the “Braided-Island Lake” in the conjoined Senegal-Niger image.

This form was first defined by Al-Idrisi in the maps accompanied by his *Book of Roger* in Sicily in 1154. Here he is credited with the delineation of this important lake containing the island of Wangarah. Yet he must also carry the burden of many errors in propagating the confusion of a westward flowing direction for the conjoined Niger River.

As such, however, the “Braided-Island Lake” appeared during 5 more centuries in numerous copies, with the earliest extant being the Paris/MS Arabe 2221 dated c1300 AD and this one being the Pocock manuscript of 1450 in the British Library.
Both Italian and Majorcan Catalan charts carried braided or rivulet patterns of this focus lake often overlooked in this Cresques depiction of the gold nugget of Mana Musa but yet this lake is undeniably present with-in the river system.
And in the famous Majorcan portolan of Estense—Modena 1450
The Walsperger derived Zeitz mappamundi is known to be drawn on Venetian paper c 1470
The Venetian merchant Andreas Bianco depicts the focus lake here after landing with the Portuguese in the Senegambian coast 1440-1450
This lake was further demonstrated quite prominently in the Martin Behaim depiction of Africa in his 1492 globe and dual hemisphere map of the world.
Of all the sources known, the most noteworthy influence is epitomized by the monastic father of Venetian cartography in producing the grand Fra Mauro map in Venice (1459).

Having some Portuguese commissioned maps in his possession, his effort was culminated with the able collaboration of the Venetian merchant Andrea Bianco providing first-hand renditions of the Senegal (1436-1448).

Herein contains the particular attention to the form of Africa which prominently portrayed this marshy island lake beyond the Sahara in the West African interior.
Early Patterns

3. “GUARDA” Form

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Giacomo Gastaldi 1548--1780 AD

Between these and the ultimate definitive form, this image was amplified to prominence by a lineage of notable cartographers leading to the pivotal 1564 Gastaldi-Guarda form, defining this Lake with the name Guber/Guarda[1], and equating it with the ancient Nigrite Palus.

The Gastaldi-form (1548-1750) >~~~~~~(^)~~~~~~<
Following Gastaldi’s form, the Tramezino Hemispheres (1554), and the Arabic map by Haggi Achmed (1559) made rapid propagation of this lake-form by way of the Lafreri school
At this pivotal point, it was the Giacomo Gastaldi revisions in his Africa maps for the 1548 Ptolemy Atlas, and the 1554 Ramusio tome, which highlighted a discernible lake in the West African Sahel.
These climaxed in his Wall-Map for the Doge Palace, subsequently published in 1564 as the consummate eight-sheet Map of Africa assigning the name Guber/Guarda to this prominent feature
In addition, Bertius (1628) and Sanson (1667) made particular notes of this feature being the crocodile lake of Herodotus and the Nigrite Palus of Ptolemy.
Later Patterns

4. “SEPARATION” Form

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Guillaume De L’Isle 1722--present

And Finally, The Separation-form (1722-present)

>~~~~~x ~~~O~~~~<
The noteworthy revision giving the definitive posture of this lake began with the 1722 map by Guillaume de L’Isle outlining the actual separation of the Senegal and Niger Rivers.

This hydrographic separation was mainly based on the observations of Mandingo traders leading Andre Brue and his successors from 1698-1720).

At the French settlement of St. Joseph in Galam deep on the upper Senegal River, they recorded reports beyond the Faleme branch.

The Senegal was described to flow from a mythical lake whose situation could not be ascertained (Marberia) westward down the falls of Govinea.

A separate nearby unnamed lake in the marshes to the east was noted to give rise to a river named Guien (Niger) leading north to Timbuctoo.
This separate unnamed lake is here identified as the actual Lake Debo of today located in the Inland Niger Delta between Jenne and Timbuktu.
The final documentation of the structure and location began in 1798-1805 when the fantasy of Lake Maberia faded in appearance and the actual Lake Dibbie/Debo was visited by Mungo Park in fact flowing eastward and drawn by Rennell.

It was then described by Caillie (1828) and confirmed by Barth (1853) in its definitive position on the tangled Niger River Marsh at 15 degrees N. latitude and 4 degrees W. longitude
Lucia Lovison-Golob produced this Geographic Information System (GIS) transparent overlay at the Harvard University scanner using ARCGIS and known control points on a raster map rectified by latitude, longitude, scale, and projection. All three early maps align the ‘focus-lake’ within 1.5 degrees of the actual location of Lake Debo Inland Niger Delta at 15N latitude and 4W longitude.
Physical Basis for the Cartographic Evidence:

The foundation of Lake Debo is manifest in the upper reaches of the headwaters near where the Niger and Bani merge. There the grade of slope from the Fouta Jalon highlands abruptly halts to an imperceptible 5 ft. per 100 miles at the wide flat plain of Macina. This slowing of flow is fundamental to the formation of Lake Debo. Combined with the underlying geologic substrate, it provides the physical basis for the ancient structure of this pool.

The basement structure originates from dense crystalline rock of Pre-cambrian sandstone compacted in the broad Taoudeni Syncline as an alluvial fan and covered by a hard layer of cemented-laterite. This compressed platform allows the Niger water entering the level expanse to radiate in a wide tangle of shallow channels, meandering braids, and inundated marshes over 200 miles long and 50 miles wide, laying down extensive deposits in a vast Inland Delta at the edge of the Sahara Desert.

This vital Inland Niger Delta with its wide ageless flooding is in-fact the cartographic origin of Lake Debo.
The Inland Niger Delta at 15N and 4W is scarcely shown on modern maps as a limited area of braided swamp within the Niger bend. It is rarely given a name and remains mostly unnoticed in the world’s view of modern Africa.
Yet, the true significance of this wetland lies in the fact that it was once home to a thriving civilization centered on an array of specialized urban settlements near Lake Debo, in the vicinity of old Jenné-Jeno.
This basis was uncovered in 1981 in the archeological excavations by Susan and Roderick McIntosh.
As well documented, they identified three phases of human habitation in this region from 250BC to 1400AD. They outlined population growth and occupation patterns along with trade and specialization aspects, including the human responses to changing environmental conditions. This area endured as a beacon of individual enterprise in a cohesive self-sustaining society for over 1500 years; which leads us now to appreciate the provocative meaning of this persistent ‘Lake’ ingrained thus in the maps of our mind.
Cognitive maps are an inherent construct of symbolic thought in all cultures and all ages. Original systems such as epic litanies and celestial lines composed the tapestry of cartographic conventions in earlier times. Our results imply that forms of these oral mnemonics made their way from the Griot’s experience, to the channels along the Islamic Hadj, and on to the Renaissance plates of the 15th century.
Pitched on each inherited background, what the early maps reflect is a consistent knowledge of this object at different times in the past, and the process of expressing what exists.

To gain insight concerning the errors and the truths intertwined in this lineage of Lake Debo, the template of an influential twentieth century philosopher fits this application for cartography past and present. To draw from Ludwig Wittgenstein, is to seek a quenching of the ageless thirst to find meaning in the objects constituting our existence; and to wash away the errors in language, and illuminate a structural path to ethical knowledge. Like Wittgenstein, those applying cartography must be able to both expand and repudiate the limits of our earlier works. The problems evident in the application of these maps hinge on the limitations of simply connecting objects, names, facts and propositions in a “picturing-relation”. The reality or meaning of an object is not the singular name (denotation), nor the shape or location of a singular state-of-affairs (the mirroring of facts), but more it is the “Use” or the multiplicity of practices that give meaning to an object. The different uses and identities are given content by our sets of practical affairs, and our dealings with one another, and with the land we inhabit. The “Use-Identity” of an object is thus the fabric of many inclusive “Forms-of-Life”

Nevertheless, attempts at the usage-game associating this water-system with a “conduit-use”, created the Mediterranean error of a westward link in the Niger River. In fact, most of what we see is bound up in what we do; thus it is hard to imagine the thought of an object without the experience of its use. The truth in the remarkable prevalence of Lake Debo lies concealed in the indigenous oral-rules of the “African-use”, that being the seeking of important “high-ground use” in the ageless flooding of the Inland Delta. Unrecognized but ironically consistent, this thread of meaning wove its way through the cartographic record as depicted in land-locked barbell-lakes, evaporation pools, braided islands, Guarded-Beacons, and finally the marsh, marais, swamp, and bog depictions of Lake Debo.

Whether viewed as a personal language or a more public check of mutual criteria, it remains for successful applications of cartography, to find agreement in practice and to integrate multiple cultural themes into the reality of an object or a space. A place is a way-of-life. Language, art, and maps are not pictures at all; but rather, tools for making concepts about the meaning of what exists. With the next advent of G.I.S. technology, any outcome from such new tools may then achieve success either measured by economic standards or ethical standards, or better yet both synergies for social cohesion and personal satisfaction.
In conclusion, an aqueous icon, transmitted from map to map, stood for much more than just a shallow body of water. The tacit message in this recurring image was not just the outline of an object.
but more an entity, a braided lattice of vibrant habitation. Its regularity alone connotes precisely the importance of such an eco-system in the interior of Africa.
The Map as a Metaphor

“……Sea of Busy Commerce”

From the start, the map, as a metaphor, was always pointing to this reality, a Bahar Seafeena, indeed translated a ‘sea of busy commerce’.
The Afriterra Free Library

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